CLAIMS

1. An apparatus for wireless communication, comprising:

a) a plurality of slave transceivers spatially separated from one another within an enclosed region, each of the slave transceivers comprising an associated slave central processing unit (slave-CPU), each slave-CPU being adapted to control at least one adjustable operational parameter of its associated slave transceiver in response to at least one characteristic of a received reverse radio frequency (RF) signal, and each slave transceiver being adapted to:

i) receive the reverse RF signal;

ii) process the received RF signal based on at least one of the adjustable operational parameters; and

iii) generate a reverse slave signal; and

b) a master transceiver coupled the plurality of slave transceivers, the master transceiver being adapted to:

i) convey setting signals to the plurality of slave transceivers so as to set the adjustable operational parameters thereof;

ii) receive and process the reverse slave signals from the plurality of slave transceivers, so as to generate corresponding reverse master signals; and

iii) convey the reverse master signals to at least one base station transceiver subsystem (BTS) external to the region.

2. The apparatus of Claim 1, wherein the plurality of slave transceivers comprises at least one diversity transceiver and at least one main transceiver, wherein the RF signals received by the diversity transceivers are substantially different from the RF signal received by the main transceivers.

3. The apparatus of Claim 1, further comprising a management unit adapted to convey instructions to the plurality of slave-CPUs to set at least one of the adjustable operational parameters of at least one of the slave transceivers to initial

values.

4. The apparatus of Claim 3, wherein the master transceiver is coupled to the BTSs and adapted to:

a) receive and process forward RF signals from the BTSs;

b) generate corresponding forward master signals; and

c) convey the forward master signals to the plurality of slave transceivers; and

wherein each slave transceiver is adapted to:

a) receive the forward master signals; and

b) generate corresponding forward slave RF signals; and

wherein each slave-CPU is adapted to:

a) monitor the generated forward slave signals;

b) to adjust at least one of the operational parameters from an initial value in response to the generated forward slave signals.

5. The apparatus of Claim 4, wherein the slave-CPU is further adapted to adjust at least one of the operational parameters from an initial value in response to the generated reverse slave signals.

6. The apparatus of Claim 4, wherein the master transceiver comprises a master-CPU which is adapted to monitor at least some of the slave-CPUs and, in response to the slave-CPUs and to initial instructions received from the management unit, to vary at least one of a group comprising a number of BTSs communicating with the master transceiver and at least one channel parameter of each BTS.

7. A method for wireless communication, comprising:

a) positioning a plurality of slave transceivers within an enclosed region, at least one of the slave transceivers comprising a slave central processing unit (slave-

CPU), at least one of the slave-CPUs being a controlling slave-CPUs adapted to control an adjustable operational parameter of the slave transceiver that comprises the controlling slave-CPU;

b) receiving, within one of the plurality of slave transceivers, a reverse radio frequency (RF) signal; and

c) controlling, in the receiving slave transceiver, the adjustable operational parameter of the receiving slave transceiver in response to a characteristic of the reverse RF signal.

8. The method of Claim 7, wherein the adjustable operation parameter is the gain of an amplifier within the slave transceiver.

9. The method of Claim 7, further comprising;

a) generating an alternative frequency (AF) reverse slave signal in the receiving slave transceiver in response to the reverse RF signal;

b) receiving the AF reverse slave signal in a master transceiver;

c) in the receiving master transceiver in which the reverse slave signals were received, frequency converting the received AF reverse slave signal to an RF reverse master signal;

d) conveying the reverse master signal to a base station transceiver subsystem (BTS) external to the region.

10. The method of Claim 9, further comprising;

a) conveying a setting signal from the receiving master transceiver to the receiving slave transceiver; and

b) in response to the conveyed setting signal, adjusting, at least one operational parameter of the receiving slave transceiver.

11. The method of Claim 7, wherein the plurality of slave transceivers comprises at least one diversity transceiver and at least one main transceiver, the slave transceivers and the diversity transceiver being located such that the RF signal

received by the diversity transceivers is substantially different from the RF signal received by the main transceivers.

12. The method of Claim 7, further comprising:

a) receiving an instruction in a slave-CPUs from a management unit;

b) in the receiving slave-CPU, setting at least one adjustable operational parameter of the slave transceivers comprising the receiving slave-CPU to initial values in response to the received instruction.

13. The method of Claim 12, and comprising:

a) receiving in the forward master RF signals from the BTS;

b) generating forward master AF signals in response to the received forward master RF signals;

c) conveying the forward master signals to the plurality of slave transceivers,

d) in the plurality of slave transceivers, receiving the forward master AF signals;

e) in the plurality of slave transceivers, generating forward slave RF signals in response to the received forward master AF signals;

f) monitoring the corresponding forward slave RF signals in each of the slave transceivers; and

g) varying at least one of the operational parameters of each of the slave transceivers from their initial values, in response to the forward slave RF signals and reverse slave RF signals.

14. The method of Claim 13, wherein the master transceiver comprises a master-CPU which is adapted to monitor at least some of the slave-CPUs and, in response to the monitored slave-CPUs and in response to initial instructions received from the management unit, to vary at least one BTS communicating with the master transceiver and at least one channel parameter of the varied BTSs.

15. An Apparatus for wireless communication, comprising:

a) a first plurality of slave transceivers which are spatially separated from one another within an enclosed region, each of which slave transceivers is adapted to receive a reverse radio frequency (RF) signal generated by a mobile transceiver within the region and to process the RF signal, based on at least one adjustable operational parameter, so as to generate a reverse slave signal, each of the slave transceivers comprising an associated slave central processing unit (slave-CPU) which is adapted to control at least one of the adjustable operational parameters of the slave-CPU's associated slave transceiver in response to at least one characteristics of the reverse RF signal; and

b) a second plurality of master transceivers, which are coupled to receive and process the reverse slave signals from the first plurality of slave transceivers so as to generate corresponding reverse master signals, and to convey the reverse master signals to a third plurality of base station transceiver subsystems (BTSs) external to the region, and which are adapted to convey setting signals to the first plurality of slave transceivers so as to set the adjustable operational parameters thereof.

16. The apparatus of Claim 15, wherein each of the master transceivers comprises a switch and a third plurality of gain elements and a master-CPU, wherein the master-CPU of each master transceiver is adapted to operate the switch and the third plurality of gain elements of the associated master transceiver so that the associated master transceiver communicates via the third plurality of gain elements with at least one of the third plurality of BTSs.

17. The apparatus of Claim 16, wherein each of the master transceivers is adapted to adjust a bandwidth of at least some of the slave transceivers responsive to the number of BTSs being communicated with via the third plurality of gain elements.